

SECRET

Vehicle Concept

[Redacted]

Copy \_\_\_\_\_ of \_\_\_\_\_

4 August 1969

25X1

MEMORANDUM FOR: Comptroller, OSA

SUBJECT : EXCOM Issue NO. 3  
Advanced Aircraft R&D

REFERENCES : A - [Redacted] dtd 1 Aug 1969, Subj:  
EXCOM Meeting - 8 Aug 1969

B - [Redacted] dtd 30 July 1969,  
Subj: NRP Financial Program for 1970

Attached hereto are D/R&D comments on subject EXCOM  
Issue NO. 3 as requested in Reference A and as set forth  
in Reference B.

[Redacted]

Deputy for  
Research and Development  
Special Activities

25X1

Attachment: (1)  
As stated

D/R&D/OSA/[Redacted] 4 Aug 1969

Distribution:

- Copy 1 - COMPT/OSA
- 2 - D/COMPT/OSA
- 3 - BFD/COMPT/OSA
- 4 - D/SA
- 5 - D/M/OSA
- 6 - D/R&D/OSA
- 7 - RB/OSA

SECRET

[Redacted]

25X1

NRO review(s) completed.

SECRET

Attachment to

25X1

ISSUE NO. 3 - ADVANCED AIRCRAFT R&D

BACKGROUND:

OSA is conducting a study of Advanced Aerodynamic Reconnaissance Systems under direction of the NRO. This two phase study approved by the EXCOM explores various methods of achieving a quick reaction strategic reconnaissance capability survivable primarily in the sov bloc defensive environment through the 1975-1980 period. The first phase, using FY-69 funding of [ ] involves two contractors. A contract was initiated with [ ] on 27 January 1969 for the defensive threat analysis and establishment of survivable profiles and tactics options. This effort is funded at [ ]. A contract was initiated with [ ] in May 1969 to conduct a technological comparison of candidate hardware concepts meeting the profiles and tactics formulated [ ]. This effort funded at [ ] is scheduled for completion by 30 November 1969. The second phase of the study proposed for FY-1970 funding at [ ] would involve analysis, refinement, and further definition of one or more optimum candidate configurations in terms of hardware technology constraints in relation to the threat. This second phase would be scheduled for completion in June 1970.

SIGNIFICANCE:

Survivability is the key to any future reconnaissance system. Analysis of the threat and survivability form a major part of this study along with technological feasibility. This study is beginning to show that survival may be questionable for a nonmaneuvering vehicle following a constant or fixed track. We feel that the results of this kind of analysis coupled with the technological feasibility and constraints involved in such parametrics as maneuverability will greatly enhance the ability to weigh various options and decide upon future courses of action.

GROUP 1  
Excluded from automatic  
downgrading and  
declassification

SECRET

25X1

Attachment to

Page 2

25X1

RECOMMENDATION:

One of the final purposes of this study is to provide a firm basis for program cost estimates involving one or more options for a most survivable system. A decision at this time to discontinue the study predicated upon future year budgetary funding estimates would be to prejudge the outcome of the study.

The CIA recommends against Option d, and considers a, b, or c as possible alternates but recommends an additional option which would fund the FY-70 studies now; then have a special EXCOM review to determine further action when the results of the final FY-1970 funded studies are available.

SECRET

25X1

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200430006-7

## ISSUE NO. 3 - ADVANCED AIRCRAFT R&amp;D

BACKGROUND:

OSA is conducting a study of Advanced Aerodynamic Reconnaissance Systems. This two phase study approved by the EXCOM explores various methods of achieving a quick reaction capability survivable primarily in the sov bloc defensive environment through the 1975-1980 period. The first phase, using FY-69 funding of [ ] involves two contractors. [ ] in January 1969 initiated work on the defensive threat analysis and establishment of survivable profiles and tactics options at a level of [ ] in May 1969 initiated work on a technological comparison of candidate hardware concepts meeting the profiles and tactics formulated [ ]. This effort funded at [ ] is scheduled for completion by 30 November 1969. The second phase of the study proposed for FY-1970 funding at [ ] would involve analysis, refinement, and further definition of one or more optimum candidate configurations in terms of hardware technology constraints in relation to the threat. This second phase would be scheduled for completion in June 1970.

SIGNIFICANCE:

Survivability is the key to any future reconnaissance system. Analysis of the threat and survivability form a major part of this study along with technological feasibility. This study is beginning to show that survival may be questionable for a nonmaneuvering vehicle following a constant or fixed track. We feel that the results of this kind of analysis coupled with the technological feasibility and constraints involved in such parameters as maneuverability will greatly enhance the ability to weigh various options and decide upon future courses of action.

RECOMMENDATION:

One of the purposes of this study is to provide a basis for program cost estimates for a survivable system. A decision at this time to discontinue would be to prejudge the outcome of the study and deny us valuable information. We recommend against Option d. We do recommend re-approval of the FY-70 studies now with an EXCOM review after their completion in June 1970 to determine further action.

SECRET

- File*
1. Veh Concept (Adv Aircraft) # 5
  - ✓ 2. FY71-74 NRO Prog Call # 6
  - ✓ 3. NRO FY-70 Budget Call # 7
  - ✓ 4. FY71-75 CIA Prog Call extra detail

Copy 5 of 8

17 July 1969

25X1

ILLEGIB

MEMORANDUM FOR: Comptroller, OSA

SUBJECT : Advanced Aircraft Briefing for  
11 July 1969

25X1 REFERENCES : A. [redacted] dtd 29 Apr 66  
titled "NRO Program Cost Estimates"  
(FY-68-72)

25X1 B. [redacted] dtd 4 May 65 titled "Summary  
Review of ISINGLASS Program"

25X1 C. [redacted] dtd 3 May 65 titled "Program B  
FY-66 Budget Submission"

25X1 D. [redacted] dtd 20 May 65 titled "Program B  
FY-67 through FY-71 Funding Forecast"

1. During subject briefing, [redacted] raised the question regarding inclusion of engine development and procurement. He indicated that one of the ISINGLASS cost estimates in his possession excluded engine development and procurement.

25X1

2. Reference A, the FY-68-72 Budget Submission dated 29 April 1966 and forwarded to NRO did exclude ISINGLASS engine development and procurement. This document based its cost estimates on technical data confirmation initiated in FY-66 with a projected IOC in FY-73. Support for the eight operational aircraft was also included. Total funds expended by the end of FY-72 would have been [redacted]

25X1

25X1 [redacted] (without engines). The estimated cost of the excluded engine development and procurement was set at

25X1 [redacted] This implied that the [redacted]  
25X1 would have become [redacted] had the engine development and procurement been included.

25X1

SECRET

25X1

SECRET

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

Page 2

3. Reference B, an internal ISINGLASS document for the DD/S&T dated 4 May 1965 was the basis for the last chart (attached) presented at subject briefing when [redacted] raised the "engine" question. Both this document and the chart included engine development and procurement. Cost estimates were predicated on a FY-66-70 development time period and indicated the additional costs for delivery completion by the end of the seventh year for the eight operational aircraft with their 16 engines. These cost estimates as presented and as set forth in Reference B page 14 were [redacted] for the development phase plus [redacted] for eight operational aircraft with their 16 engines. These estimates resulted in a total of [redacted] for a program comparable to that set forth in paragraph 2 above except that engine development and procurement was included in the [redacted] program and excluded from the [redacted] program of para 2.

4. Reference B, the same internal ISINGLASS document dated 4 May 1965 which included engine development and procurement, was also the basis for Reference C, the FY-66 Budget Submission to NRO dated 3 May 1965 which included engine development and planned subsequent year procurement. This (Ref C) paper reflected an initial year expenditure of [redacted] for FY-66. Reference D, the FY-67-71 Funding Forecast to NRO dated 20 May 1965 again included engine development and procurement and reflected a total expenditure of about [redacted] for the period FY-67 through FY-71.

5. During subject briefing and with reference to the last chart (attached), it was clearly stated that a [redacted] inflation was applied to the [redacted] ISINGLASS development to bring it to [redacted] in terms of today's dollars and that the same [redacted] inflation must be applied to the [redacted] (for eight operational ISINGLASS aircraft and 16 engines) to bring it to today's [redacted]. It was then clearly stated that the [redacted] and the [redacted] were additive and would result in a total of [redacted].

6. In summary then, a program (including engine development and procurement) estimated in 1965 at [redacted] for the FY-66-70 time period is estimated in 1969 at [redacted] for the FY-71-75 time period. This reflects an increase of [redacted] for inflation or an average increase of [redacted] per year over five years.

SECRET

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

[REDACTED]

Page 3

25X1

25X1 7. This memorandum is considered an internal OSA working paper. Suggest that COMPT/OSA have the reference documents reviewed in terms of dates, actual forwarding through channels, and proper interpretation of dollar estimates prior to preparation of any formal summary response to [REDACTED] question as may be appropriate.

[REDACTED]

25X1

Deputy for  
Research and Development  
Special Activities

Attachments:  
As stated

25X1 D/R&D/OSA/[REDACTED]/17 Jul 1969

Distribution:

- Copy 1 - COMPT/OSA
- 2 - D/SA
- 3 - BFD/COMPT/OSA
- 4 - CMD/COMPT/OSA
- 5 - 7 - D/R&D/OSA
- 8 - RB/OSA

SECRET

[REDACTED]

25X1

ADVANCED AIRCRAFT

ROM COSTS FY-1971 THROUGH 1975

LIMITATIONS:

FY-69 PARAMETRIC STUDY FOR SURVEY OF SURVIVABLE PROFILES AND CANDIDATE  
CONFIGURATIONS - INCOMPLETE

FY-70 STUDY CONTINUATION TO EXAMINE OPTIMUM PROFILE AND SELECTED CONFIGURATION  
AND TO DEFINE PROGRAM - NOT STARTED

NO REAL BASIS FOR COST ESTIMATES OR PLANNING EXISTS

SECRET



SECRET

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

ADVANCED AIRCRAFT

ROM COSTS FY-1971 THROUGH 1975

ASSUMPTIONS:

PRE-JUDGE STUDY EFFORTS

USE BEST AVAILABLE COSTING DATA BASE

PROJECT TO CURRENT TIME PERIOD DOLLARS

APPROACH:

BE CONSERVATIVE AND REALISTIC

BASE COSTS ON HYPERSONIC VEHICLE - (ISINGLASS)

APPLY INFLATIONARY FACTOR

SECRET

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

25X1

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

Approved For Release 2004/05/21 : CIA-RDP71B00822R000200130006-7

SECRET

ADVANCED AIRCRAFT

25X1

BASIS - FOR FY 66-70 COST  (Estimated May 1965)

5 YEAR DEVELOPMENT & FLIGHT TEST PROGRAM (FY-66 - FY-70)

3 TEST AIRCRAFT

7 ENGINES

CAMERA ENGINEERING & TEST

FACILITIES

FIRST FLIGHT - END OF 3rd YEAR

PRODUCTION AIRCRAFT INITIATION - END OF 2nd YEAR

8 AIRCRAFT

16 ENGINES

DELIVERIES START - END OF 4th YEAR

FINISH - END OF 7th YEAR

ADDITIONAL COST TO COMPLETE PRODUCTION

25X1

SECRET